ERIC Document Resume	See Instruction Sheet	DATE OF RESUME	DATE RECEIVED

A. PUBLICATION DATA

1. ACCESSION NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.	DO NOT WRITE IN SPACE BELOW
ED001301	N.A.	SAE 9515	

4. AUTHOR(S):
Leino, Walter B. and Haak, Louis A.

5. TITLE OF DOCUMENT ABSTRACTED:
The Teaching of Spanish in the Elementary Schools and the Effects on Achievement in other Selected Subject Areas

6. PUBLICATION TITLE:
N.A.

7. EDITOR(S):
N.A.

8. PLACE OF ORIGIN
ORG. St. Paul Public Schools
ST. CITY, STATE St. Paul, Minnesota

9. PUBLISHER OR SOURCE
Cooperative Research, Office of Edu., Dept. of HEW, Washington, D. C.

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	Nov. 63	100

TELE. EXT.
INST/LOC CODE

MICROFILM COPY AVAILABLE YES [X] NO [ ]

COPYRIGHT GRANTED YES [ ] NO [X]

COPYRIGHT RELEASE FILED YES [ ] NO [ ]

TYPE OF REPORT
PROPOSAL [ ]
IN-PROGRESS [ ]
FINAL [X]
FOLLOW-UP [ ]

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
experimental study

16. INDEXING TERMS (6-12)

time allotments	Spanish instruction	education research	
elementary education	televised instruction	learning overlap	
foreign languages	curriculum planning	elementary curriculum	

17. ABSTRACT (MAX. 250 WORDS)

With the increasing pressures for teaching more subjects and devoting more time to present subjects, is the teaching of foreign language in elementary school a worthwhile objective? A three year study in the St. Paul area attempted to determine whether devoting fifteen minutes per day to Spanish instruction via television had an effect on learning in other subject areas, and to answer other questions relevant to foreign language instruction. Classes from six schools were used as subjects. Six other schools' classes served as controls. Appropriate experimental techniques were applied with the Iowa Tests of Basic Skills and the Stanford Social Studies Test serving as measuring instruments. Because of the sampling methods used, considerable strain was placed upon the assumptions underlying the statistical procedures employed. Certain conclusions can, nevertheless, be drawn: 1.) Deletion of time from arithmetic, language, and social studies had no detrimental effect upon measured achievement in the subject areas from which time was taken. 2.) Measured intelligence is positively correlated with measured achievement in the learning of Spanish. These findings have several implications for curriculum planning at the elementary school level.

Unanswerable were certain other questions implicit in the other stated objectives of the program: 1.) To determine whether grade level has an effect on language learning under similar circumstances. 2.) To determine learning in other subjects. 3.) To determine whether time alloted to certain subjects, to allow time to teach a foreign language, has more effect in one area than in another. (Eight appendices contain class average scores obtained throughout the study.).

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
	22. TOTAL COST OF PROJECT	
	23. DURATION OF PROJECT	U.S. Department of Health, Education, and Welfare Office of Education

ERIC F.— 1

ED001301

THE TEACHING OF SPANISH IN THE ELEMENTARY SCHOOLS AND THE EFFECTS ON ACHIEVEMENT IN OTHER SELECTED SUBJECT AREAS

U. S. Department of Health, Education and Welfare

Office of Education

Contract SAE 5315

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St. Paul Public Schools

St. Paul, Minnesota

November, 1963

THE TEACHING OF SPANISH IN THE ELEMENTARY SCHOOLS AND THE EFFECTS ON ACHIEVEMENT IN OTHER SELECTED SUBJECT AREAS

--*--

The research reported herein was performed
pursuant to a contract with the
U. S. Department of Health, Education and Welfare
Office of Education

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St. Paul Public Schools
St. Paul, Minnesota

The Teaching of Spanish in the Elementary Schools and the Effects on Achievement in Other Selected Subject Areas.

The United States Office of Education supported the second and third years of a three-year study.

Contract Number:	SAE 9515
Contractor:	Saint Paul Public Schools Saint Paul, Minnesota
Principal Investigator:	Dr. Walter B. Leino, Supervisor Division of Tests and Measurements
Associate Investigator:	Mr. Louis A. Haak, Research Assistant Saint Paul Public Schools
Term:	June 15, 1961 to August 30, 1963

ACKNOWLEDGEMENTS

We wish to acknowledge the invaluable assistance given us by Dr. Richard Hansen and the late Dr. Nolan Kearney who initiated this study, by Dr. John Bickneil who helped to develop the proposal, and to Edgar Williams, Warren Panushka and Gordon Miniclier who gave us advice throughout the study. We wish, also, to express our obligation to Mr. Howard Hathaway and Mr. Clair Tettemer of KTCA for their assistance in the development of Spanish tests, to Mr. Richard Dvorak for his help with statistical tabulations and to the following teachers whose classes were involved with the teaching of Spanish:

Wilma Allison
Mrs. Diane Arndt
Ernest Ballas
Mildred Bashefkin
Gertrude Berg
Mrs. Ebba Brenner
Annabel Brunner
Mrs. Blanche Burroughs
Leona Chirpich
Mae Cleary
Irene Collins
Mrs. Esther Davis
Nora Eastman
Mrs. Judith Franz
Kathleen Frye
Mrs. Irene Girard
Robert Grant
Thomas Haas
Harold Hagen
Wilma Hageseth
Helga Hellevik
Mrs. Lorraine Hertz
Mrs. Ritva Johanson
Hugh Jordan
Thomas Kealy
Grace Kelly
Mrs. Beatrice Kotz
Mrs. Rachel Leonard
Ruth Mahon
Eugene Malmstedt
Gilbert Martinucci
Marjorie Marx
Mrs. Corrine Merrick
Dorothy Oberg
Doris Olseen
Mrs. Evelyn Opalinski
Mrs. Eleanore Ostrom
Mrs. Laura Pothoff
Olga Ramberg
Gertrude Reinicke
Mrs. Mary Cay Ricci
Doris Rudquist
Jerald Shannon
James Shinn
Sharon Sweeney
Mrs. Barbara Wilkowske
Gary Zimmerman

We are also indebted to the teachers whose classes acted as controls. We wish to thank the students who participated in the study along with the control students who were subjected to considerable evaluative testing. Special acknowledgements are due Dr. A. Bruce Gaarder and the U. S. Department of Health, Education and Welfare for financial assistance. The completion of the study would not have been possible without this support.

W.B.L.
L.A.H.

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BACKGROUND OF STUDY

In recent years there has been a great deal of discussion concerning the teaching of a second language in elementary schools. These discussions have taken sides, pro and con, without much or any basis for resulting conclusions. While it will probably be conceded that with our expanding environmental contacts it is possible that anyone may at some time have a need for the use of another language, is this in itself reason enough for expending the time, facilities, and personnel necessary to learn this language? A conclusive answer to this question would be greatly appreciated by many in the field of education.

Are the schools in a position where they can afford to expend the time needed to learn another language with the school day now being over-crowded with subject offerings? The elementary schools have gradually increased the number of subject offerings without being aware of the optimum time allowance for each subject area or without lengthening the school day. If schools at the elementary level are to continue to provide an adequate background in all essential areas, it is important that a critical look be given to present organization when changes are to be made. Decisions must be made as to the relative importance of the various subject areas and their placement within the curriculum. To arrive at these decisions the relationships between time and amounts of learning must be more accurately determined.

Too often in the field of education we tend to accept many things as they are simply because they have existed for a long period of time or because of general resistance to change. Changes undoubtedly are going to be needed but it is important that they be given a critical evaluation as to their effects upon each child within the milieu in which that child will be developing and living.

The problems in this study hinge around two points which may be unanswer-

able but about which a great deal more should be known. The first of these is the amount of time given to study within a certain subject area at a particular grade level. The second evolves around the ability of students at a particular grade level to learn a second language.

Very little is found in the literature about time allotments for different subject areas in the elementary school. Most of a group of New English school systems, that were contacted in a survey on elementary school subject area time allotments, indicated that a time allotment schedule was suggested but not required.(5) A small number of school systems followed a required time allotment schedule while some schools left time allotment entirely up to the individual teacher. John W. Bell and Arthur S. Green (4) suggest that the elementary school subject time allotment schedule should be adjusted around a tentative schedule on the basis of class ability. This basic schedule would be developed for 60% of the student population and additional time would be allotted to the basic skill areas for the low-ability group. Less time should be allotted to the basic skill areas for the high-ability groups with the additional time being used in such areas as classes in literature, foreign language, typing, or the physical sciences.

At the present time the St. Paul Public Schools are following time allotments suggested by a committee composed of St. Paul elementary school principals. This schedule was developed with the theory that a teacher's program should reflect the philosophy of the school and the goals of the instructional program. One of the most difficult tasks in programing is that of arranging time allotments which are sufficient for all the experiences included in the education of boys and girls. In addition to the broad aims, it is necessary to be sensitive to the particular needs that characterize the local situation.

A good program should facilitate the learning process. The program

should be a structure that protects against wasteful tangents. It should be the framework of the curriculum providing scope and resiliency to action. It should be fashioned by hand to suit a particular group of children in a specific environment.

For a program to have value, it must make sense to pupils, teachers, and parents who are most concerned with its usefulness. A classroom program is a means to an end. Results are measured in light of one's objectives.

The time allotments finally adopted for the schools in St. Paul were the result of the committee's recommendations and they attempted to reflect as much of the criteria given above as possible.

With greater relationships between countries, and therefore people, taking place every day it is probably agreed by almost everyone that there has been an increasing need for the ability to speak and understand other languages. This study in no way disagrees with an increased need for the knowledge of other languages, but it does attempt to arrive at some answers to questions that arise when the schools take on the responsibility of teaching another language.

In the past several years schools have been under pressure to increase the amount of time being used for certain subject areas as well as to increase the number of subject offerings. Much pressure has been exerted to teach a second language beginning at the first grade level and continuing as long as the student remains in school. At the secondary or college level the selection of a foreign language is primarily an elective subject. While students may be encouraged to study a second language, the decision very often is dependent upon the availability of instruction in a language and the interest of the student.

At the elementary school level most classes are so arranged that all students are required to take part in all subject offerings. It is generally believed that the elementary school should allow a broad field of educational

opportunities to provide a background and to develop interests for further study. When schools are arranged on such a basis, it precludes the offering of special subjects to only a small part of the total student body. Any new subject offering must be developed in light of the broad range of student abilities and in light of the needs in the overall structure of the school curriculum.

A number of articles have been published advocating the teaching of foreign languages in elementary schools. (1,2,3,8,9) These authors cite the ability of young children to learn to speak a second language as a normal course of living and without being hindered by the accent of their original language. The younger child mimics sounds and develops the ability to learn new sounds much easier than an older person who has developed his speech habits to produce only certain sounds. If the interests in the learning of a foreign language is initiated early, the child has the opportunity to gain a thorough mastery of the language itself, that is, learning to understand, to speak, to read, and to write it correctly. These articles seldom cite research to back their claims in comparing the amount of a language learned at any particular age level but most often base their conclusions on personal experience.

Several authors have written articles which maintain that the teaching of a foreign language in elementary schools is not as effective as some people would like to believe. (6,7) These authors cite research which tends to show that no great advantage is achieved in a real understanding of a foreign language by teaching it in elementary schools. Considering the amount of time involved it has been shown that a great deal more understanding is achieved in a shorter period of time at the secondary or college level than at the elementary level. (7) Those who are against the introduction of a foreign language into the elementary schools believe that the elementary curriculum is already over-

crowded. They also maintain that a foreign language can be taught more efficiently to older children and that it is much better to learn the language closer to the time of usage, which is after high school or college graduation.

For a number of years the St. Paul Public Schools have been developing telecasts, based upon the existing curriculum, to broaden learning experiences for children. These lessons have served as a form of enrichment for students and they gave teachers an opportunity to include materials which were unobtainable otherwise.

Recently the Minnesota Council for School Television was organized by a number of schools within the Twin City area. The objective of this group was to develop and produce programs for educational television. The initial venture of this organization was the production of a series of lessons in Spanish for grades 4-5-6. This was a co-ordinated three-year program. The first of the series was produced and telecast during the 1960-61 school year. During 1961-62 period the second series was presented along with a repetition of the first-year course. The third year was produced and telecast during 1962-63, and the first two series were repeated.

In order to achieve its objectives, the series utilized the following methods:

1. Three fifteen-minute television lessons weekly for students.
2. Two fifteen-minute audio tapes weekly to be used in conjunction with the television lessons.
3. A weekly half-hour "preview" presentation prepared especially for the classroom teacher.
4. Workbooks used in conjunction with the telecasts for the purpose of helping to develop some skill in reading and writing Spanish.
5. Written information provided for the classroom teacher, presenting

the material in advance of the lessons.

The St. Paul Public Schools looked upon the development of a television language series as a unique opportunity to develop a research project involving the learning of a second language and its effect upon other areas of the curriculum. If the curriculum is to continue to reflect the philosophy of the schools, it is important that new developments be evaluated critically as to their value and also their effect on the present courses of study. The St.Paul Public Schools provided a situation which was conducive to a research project in this area because schools within the system have students with wide ranges of abilities, socio-economic backgrounds, and interests.

I. <u>OBJECTIVES</u>: The objectives of this research were:

FIRST: To determine if elementary students at various grade levels learn different amounts of a foreign language when all grades are taught the language under the same conditions.

SECOND: To determine if the amount of a foreign language learned is dependent upon the intelligence of the student.

THIRD: To determine if time deleted from that normally allotted to certain subject areas, to allow time to teach a foreign language, affects achievement in the deleted areas.

FOURTH: To determine if time deleted from that normally allotted to certain subject areas, to allow time to teach a foreign language, affects achievement in areas taught with regular time allotments.

FIFTH: To determine if time deleted from that normally allotted to certain subject areas, to allow time to teach a foreign language, has more effect in some areas than in others.

Rather than stating specific questions to be answered an attempt was made to obtain information about each of the objectives. Each stated objective in itself posed a question about which information was obtained and tested in an appropriate manner.

II. PROCEDURES:

This project was carried out over a three-year period with evaluations annually. The final results herein reported are based on data obtained over the three-year period.

As stated above, research developed around two main points: the amount of time given to study within a certain subject area at a particular grade level and the ability of students at a particular grade level to learn a second language. The particular aspects within these broader points, which were evaluated and tested, have been stated in the objectives of the study.

The research was designed to make use of the telecasts and related materials for teaching Spanish, developed by the Minnesota Council for School Television, within the framework of subject area time allotments presently followed by the St. Paul Public Schools.

All classes in the experimental group made use of the television programs and related materials for the teaching of Spanish. All classes in this category, therefore, spent a total of 75 minutes a week studying Spanish. This time was divided into three fifteen-minute telecasts and two fifteen-minute audio tapes. Since the school day was not lengthened to allow for this time, the language period had to be deleted from that time normally allotted for some other subject areas. All classes in the control group followed the time allotments suggested for their particular grade levels and did not in any way become involved with the teaching of Spanish.

All students participating in the project, both experimental and control,

were given a battery of tests measuring a wide range of subject areas and a group test of intelligence. At the end of each year the achievement battery was re-administered to both groups using alternate forms of the instrument. The experimental classes were given additional tests designed to assess their knowledge of Spanish at the end of each year. The Spanish tests used were developed locally by those actually involved in the production or teaching of the television series. All other tests used in the study were standardized instruments which will be discussed below.

Selection of the Sample:

One of the limitations of this study was the manner of sample selection. Rather than deriving the sample entirely through a process of random selection from all possible schools in the system the participating schools were selected by several people who were intimately familiar with the entire system.

Six schools were selected for the experimental group (group to which Spanish was taught) i.e., two schools from relatively high socio-economic areas, two schools from middle socio-economic areas, and two schools from lower socio-economic areas. More deliberate sample selection was not possible because of the pressure of time.

Six schools were selected for the control group (group not being taught Spanish). The pupils in the control group were quite closely comparable to the experimental schools in socio-economic status and equivalency of school programs. While the selection was not random it did provide an equivalency of samples which might not be true had random selection techniques been used. It should be pointed out, however, that because random selection was not used, some of the assumptions underlying the statistical analysis used are not completely fulfilled.

Tables 1, 2 and 3 provide details about the number of pupils within the various grades and sections involved in the study for each of the three years of the project.

TABLE I

SAMPLE 1960-61 SCHOOL YEAR

GRADE FOUR

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	14	4	7	4	15
Number of Individuals	408	129	197	138	464

GRADE FIVE

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	14	4	4	5	13
Number of Individuals	441	110	117	178	405

GRADE SIX

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	13	6	4	4	14
Number of Individuals	407	196	123	134	453

TABLE 2

SAMPLE 1961-62 SCHOOL YEAR

GRADE FIVE

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	14	4	7	4	15
Number of Individuals	329	94	179	109	382

GRADE SIX

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	14	4	4	5	13
Number of Individuals	368	92	96	156	344

TABLE 3

SAMPLE 1962-63 SCHOOL YEAR

GRADE SIX

Subject from which time was deleted	CONTROLS	EXPERIMENTALS			
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES	EXPERIMENTAL TOTAL
Number of Classes	14	4	7	4	15
Number of Individuals	286	68	162	94	324

For the experimental schools, at each grade level, the subject area from which time was to be deleted was randomly selected. All classes for each grade in any one school had time deleted from the same subject area. This was necessary because with the project extending over a three-year period it would be administratively impossible to keep the class groups intact over that period of time, but grade groups within a school tend to be much more stable. Classes at different grade levels in the same school had time deleted from different subject areas as a function of random selection. To evaluate more fully the effect of shortened period over an extended period, time was deleted from the same subject area for two or three years in the experimental school groups. (see table 4 below)

TABLE 4

Subject Areas From Which Time Was Deleted

School	Grade Four 1960-61 Grade Five 1961-62 Grade Six 1962-63	Grade Five 1960-61 Grade Six 1961-62	Grade Six 1960-61
1	Arithmetic	Language	Language
2	Arithmetic	Social Studies	Language
3	Social Studies	Language	Social Studies
4	Language	Social Studies	Arithmetic
5	Language	Arithmetic	Social Studies
6	Social Studies	Arithmetic	Arithmetic

As indicated in the table above, time for the teaching of Spanish was deleted from that time normally allotted to a specific subject area. Since the study of Spanish deleted 75 minutes a week from the time normally allotted to a subject area, it was necessary to select areas which had enough time allotted

so that the subject was not eliminated or nearly eliminated from the school program. Under the existing school day within the St. Paul elementary schools, only four subject areas had sufficient length to permit deletion of 75 minutes a week. One of these, the area of reading, was given the most time during the week. Reading, however, is so vital to other areas of learning that it was decided not to encroach upon that subject in this study.

One might wonder why time was not deleted from a number of subject areas rather than a specific subject at each grade level. The decision to restrict the deletion of time was made after a great deal of thought on the part of interested and responsible people in the school system. It was felt that under the present organization of the elementary schools, it would be too easy to get a few minutes here and there without being able to detect the source or cause of differences which might arise. With class periods shortened from specific areas, it was hoped that differences would be somewhat more discernible over the three-year span. (see table 5 below)

TABLE 5

SUGGESTED WEEKLY TIME ALLOTMENTS (In Minutes)

SUBJECT AREA	GRADES		
	4	5	6
Planning and Evaluating	50	50	50
Language Arts - Literature	70	90	90
Basic Reading	300	250	250
Handwriting	60	40	40
Language	175	175	175
Spelling	60	60	60
Arithmetic	200	200	200
Social Studies	200	250	250
Science & Health	120	120	120
Physical Education	150	150	150
Music	100	100	100
Art	90	90	90
TOTAL TIME	1575	1575	1575

When the time for teaching Spanish had been deleted from the above schedule in the appropriate areas, 100 minutes remained for language at each grade level, 125 minutes for arithmetic at each grade level, 125 minutes for social studies at grade 4 and 175 minutes at grades 5 and 6.

Teachers in both the experimental and control schools were instructed not to vary their teaching procedures from those which they customarily used. Teachers in the experimental schools were instructed that no attempts were to be made to "make up" time in subject areas from which time was deleted. If it was not possible to teach all of the material that was usually presented, this was to be accepted as one of the costs of a reduced time schedule.

Measuring Instruments

Two sets of instruments were selected to measure outcomes in the study. The first was the Iowa Tests of Basic Skills. Five major skill areas were measured by this battery. These were vocabulary, reading, language, work study skills, and arithmetic. Testing time for the entire battery ran approximately five hours. The second instrument utilized was the Stanford Social Studies Test, which covered areas loosely defined as history, geography, and civics. This test, for the most part, measured information and was not designed to test other outcomes such as the skill areas, the ability to do critical thinking, and the like. Working time on the Social Studies Test was thirty minutes. The classroom teachers directly involved in the study did the actual testing. These tests were administered during the first week of October and the third week of May for each of the three years of the program. Equivalent forms of the test were used for successive administrations to eliminate as much practice effect a as possible.

In addition to the above tests, all students, both experimental and control, were given the Otis Beta Intelligence Test during the fall of the fourth

grade year.

All students in the experimental section of the program (those learning Spanish) were tested in their understanding of Spanish at the end of each year of the program. This test was derived from information and materials covered in the telecasts and audio tapes.

All test materials were collected and centrally scored. Data obtained was punched on IBM cards. These in turn were machine processed using the data accumulated over the entire project period.

A locally-developed test in the understanding of Spanish "The Elementary First-Year Verbal Spanish Test," was administered to all students in the experimental section of the program at the completion of the telecasts for the first year. This instrument was developed to measure understanding of the material covered by means of telecasts and accompanying audio tapes.

At the end of two years of Spanish presentations Section Two of the Spanish Test "Ya Hablamos Espanol," developed by the Minnesota Council for School Television, and a Reading Test for Second Year Spanish, which was developed locally, were combined to replace the Elementary First-Year Verbal Spanish Test. These tests were developed to measure understanding of the materials covered during the telecasts and accompanying audio tapes over a two-year period.

At the end of the third year of Spanish presentations Section 3A and 3B of "Ya Hablamos Espanol," developed by the Minnesota Council for School Television, were used to measure understanding of the materials taught during the telecasts and accompanying audio tapes over the three-year period.

Appendix A contains the class mean scores for both the initial and end-of-year test (1960-61) for the different subtests of the Iowa Tests of Basic Skills and the Stanford Social Studies Test in addition to class mean I.Q.'s and First Year Spanish Test scores. Appendix B contains similar information for the

second year (1961-62) and Appendix C information for the third year (1962-63).

Methods of Analysis

The methods of analysis described below were used for each of the three years of the study where applicable.

For each of the three years of the study, comparisons were made between the three subgroups of experimental students and the control group for all measures obtained from the Iowa Tests of Basic Skills and from the Stanford Social Studies Test. For the first two years of the study, when more than one grade level was involved in studying Spanish, the different grades were also compared as to their knowledge of Spanish. No attempt was made to determine whether there were differences in the amount of Spanish learned between the different subgroups of the experimental section at each grade level.

To determine statistically significant differences in achievement for the various areas covered, an analysis of covariance test was used. The pretest score in the area involved was used as the covariate factor when testing for differences in the Iowa Tests of Basic Skills and the Stanford Social Studies Test. The I. Q. was used as the covariate factor when testing for differences in the amount of Spanish learned at the difference grade levels. The I.Q. was also used as a means of comparison for the experimental groups in determining the relationship between the amount of Spanish learned and intelligence.

All tests of significance were run at an *alpha* of .05. Even though some of the differences were so great that they would have tested significant at an *alpha* of .01, no attempt was made to test at this level in order to keep the *beta* error as small as possible.

In addition to the analysis of covariance test used to test for significant differences among a number of groups, Scheffe's test designed to determine which pairs of groups are significantly different was adopted to the analysis

of covariance design.

In order to determine whether the relationship between intelligence and the amount of Spanish learned was significant, the correlation coefficients between I.Q. and Spanish test score were calculated for boys and girls at each grade level. In addition, a test was run to determine whether there were significant differences among the different correlation coefficients.

As stated above, all tests of significance were run at an *alpha* of .05. Testing at a lower *alpha* than this may have resulted in unwarranted conclusions inasmuch as the tests of random selection for the original samples had to be based on assumptions which may not hold true.

Results

A considerable number of significant differences have appeared in the analysis that have been made over the three-year period of the study. It would be almost impossible to present all of the results in any manner other than tabular form and, therefore, these are shown for each of the three years in Tables 6, 7, and 8. These tables present those differences in results which were significant.

Included in the tables are adjusted mean scores (final test scores which have been adjusted on the basis of the pretest score in that area, or in the case of Spanish on the basis of I.Q.'s) for the various areas of the Iowa Tests of Basic Skills, the Stanford Social Studies Test, and Spanish tests.

The headings (Arithmetic, Language, and Social Studies) at the top of the columns in the tables indicate the subjects from which time was deleted. It should be remembered that no attempt should be made to compare the adjusted mean scores on the Iowa Tests of Basic Skills and Stanford Social Studies Test between grades since different items and a different number of items were involved at each grade level.

Comparisons have been made between the three subsections of the experimental group as well as the control group for various tests of the Iowa Tests of Basic Skills and for the Stanford Social Studies Test. It should be noted in the right hand column of Tables 6, 7, and 8 that differences in scores which were significant are indicated by the higher group being on the open or left side of the >. Only those groups which were significantly different are indicated. Where nothing appears in the right-hand column of the table it may be assumed that the differences between groups were not significant.

Tables 6, 7, and 8 also contain information on the Spanish testing for each of the three years of the study.

Table 6 contains the adjusted mean scores on the Elementary First-Year Verbal Spanish Test for which there were no significant differences between grades. For those scores it should be remembered that a low score was considered best since the score indicates the number wrong rather than the number correct. Table 6 also contains the correlation coefficients between I.Q. and Elementary First-Year Spanish Test scores for both boys and girls. These correlations are negative since a low rather than a high score on this test was considered best. All of the coefficients obtained were significant. The correlation coefficients for both the boys and girls in grade 5 were significantly above those for the boys and girls in grade 6. None of the other differences were significant.

Table 7 contains the information for the second year Spanish test. The adjusted mean score for the sixth grade was significantly above the fifth grade for this test. The correlation coefficients for both the boys and girls in the fifth and sixth grades were significant but none were significantly different from each other.

Data on the Spanish test obtained at the end of the third year of the study

is contained in Table 8. Since only grade 6 was involved in the study for the third year it was not possible to make a comparison with another grade. The correlation coefficients for boys and girls were significant but did not differ significantly from each other.

TABLE 6

ADJUSTED MEAN SCORES FOR GROUPS COMPARED*
1960-61

TEST AREA & GRADE		EXPERIMENTAL			CONTROL	SIGNIFICANT DIFFERENCES
		ARITHMETIC	LANGUAGE	SOCIAL STUDIES		
Vocabulary	4	27.95	27.51	26.65	23.13	A>C, L>C
Reading	4	43.80	40.71	41.66	39.09	A>C
Language	4	25.34	24.31	23.70	19.59	A>C, L>C, SS>C
Work Study	4	20.61	16.43	20.13	19.24	
Arithmetic	4	19.60	19.59	20.12	21.13	
Composite	4	27.88	26.38	26.97	24.58	A>C, L>C, SS>C
Social Studies	4	47.95	51.35	47.78	47.24	
Vocabulary	5	28.51	30.39	29.37	26.21	A>C, SS>C
Reading	5	45.23	49.38	45.57	44.40	L>A, L>SS, L>C
Language	5	24.52	26.23	24.09	20.95	A>C, L>C, SS>C
Work Study	5	21.66	22.26	21.22	22.41	
Arithmetic	5	20.48	21.78	19.99	22.92	C>A, C>SS
Composite	5	28.03	29.91	28.12	27.31	L>A, L>SS, L>C
Social Studies	5	59.19	60.08	58.42	61.83	
Vocabulary	6	29.97	31.86	30.41	28.59	
Reading	6	44.33	45.27	45.46	42.78	
Language	6	26.72	27.73	26.96	20.99	A>C, L>C, SS>C
Work Study	6	23.07	27.71	22.56	22.02	
Arithmetic	6	23.54	24.98	23.92	24.58	
Composite	6	30.05	30.83	29.88	27.85	L>C
Social Studies	6	68.17	69.62	68.23	69.35	

	GRADE 4	GRADE 5	GRADE 6
Spanish	47.91	44.12	46.16

CORRELATION COEFFICIENT BETWEEN I.Q. & SPANISH**

	GRADE 4	GRADE 5	GRADE 6	
Boys	-.603	-.670	-.407	5B & 5G > 6B & 6G
Girls	-.579	-.661	-.448	

* Final test scores which have been adjusted on the basis of the pretest score in that area, or in the case of Spanish on the basis of I.Q.'s. All tests of significance were made at an *alpha* of .05.

** The negative correlation coefficients are due to the fact that the Spanish Test scores were derived on the basis of the number wrong rather than the number correct.

TABLE 7

ADJUSTED MEAN SCORES FOR GROUPS COMPARED*
1961-62

		EXPERIMENTAL			CONTROL	
TEST AREA & GRADE		ARITHMETIC	LANGUAGE	SOCIAL STUDIES		SIGNIFICANT DIFFERENCES
Vocabulary	5	29.29	27.84	28.23	27.96	
Reading	5	47.67	43.17	48.05	46.19	A>L, SS>L, C>L
Language	5	24.71	22.90	23.36	23.29	
Work Study	5	23.58	22.20	23.82	22.01	
Arithmetic	5	22.53	22.02	22.88	22.02	
Composite	5	29.75	27.59	29.02	28.25	
Social Studies	5	59.69	63.86	59.53	60.29	
Vocabulary	6	30.00	32.05	30.52	30.79	
Reading	6	43.38	46.83	43.62	44.63	
Language	6	24.01	24.54	23.26	24.91	
Work Study	6	23.40	23.32	22.10	23.77	C>SS
Arithmetic	6	23.26	24.45	22.34	24.77	C>SS
Composite	6	28.77	30.08	28.46	29.73	L>SS, C>SS
Social Studies	6	66.40	69.60	67.95	71.51	C>A

	GRADE 5	GRADE 6	
Spanish	39.93	42.77	6>5

CORRELATION COEFFICIENT BETWEEN IQ & SPANISH

	GRADE 5	GRADE 6	
Boys	.562	.545	(Not significantly different)
Girls	.553	.625	

* Final test scores which have been adjusted on the basis of the pretest score in that area, or in the case of Spanish on the basis of IQ's. All tests of significance were made at an *alpha* of .05.

TABLE 8

ADJUSTED MEAN SCORES FOR GROUPS COMPARED*

1962-63

		EXPERIMENTAL			CONTROL	
TEST AREA & GRADE		ARITHMETIC	LANGUAGE	SOCIAL STUDIES		SIGNIFICANT DIFFERENCES
Vocabulary	6	34.06	31.87	33.39	28.34	A>C, L>C, SS>C
Reading	6	49.36	43.71	48.53	42.91	A>C, SS>C, A>L, SS>L
Language	6	28.80	26.83	26.88	22.09	A>C, L>C, SS>C
Work Study	6	25.82	22.48	25.87	22.85	A>C, SS>C, A>L, SS>L
Arithmetic	6	24.20	21.96	25.48	24.72	A>L, SS>L, C>L
Composite	6	32.75	29.11	32.48	28.16	A>C, SS>C, A>L, SS>L
Social Studies	6	69.27	69.71	69.85	70.88	

CORRELATION COEFFICIENT BETWEEN IQ & SPANISH

	GRADE 6	
Boys	.569	
Girls	.665	(Not significantly different)

* Final test scores which have been adjusted on the basis of the pretest score in that area, or in the case of Spanish on the basis of IQ's. All tests of significance were made at an *alpha* of .05.

DISCUSSION

The limitations of this study have previously been outlined. The discussion of the results and any conclusions to be drawn therefrom must be viewed in the light of these limitations.

The first listed objective of this study was the attempt "to determine whether elementary students at different grade levels learn different amounts of a foreign language when all grades are taught the language under the same conditions."

For the first year of the study it was possible to compare all three grades on this particular variable. No significant difference appeared insofar as the learning of Spanish was concerned among or between grades 4, 5, and 6. In short it would appear that the increments of the learning of Spanish at least during the first year were approximately equal grade for grade.

At the end of the second year it was possible to evaluate growth in knowledge of Spanish over a two-year period. In this instance, however, only grades 5 and 6 had received two years of instruction. The 6th grade pupils scored significantly higher than did the youngsters in grade 5 during this period.

At the end of the third year only one grade group had completed three years of instruction in Spanish, hence no comparison between grades was possible.

On apriori grounds one would expect that older and more mature pupils might show greater gains or increments of learning in Spanish. This expectation, however, was not supported by the data obtained by the cross comparisons made on grades 4, 5, and 6. Although a significant difference in measured gains appeared between grades 5 and 6, at the end of two years of study, the data is not sufficiently conclusive to warrant the generalization that maturity and/or age per se has an effect on the size of the learning increment. Longitudinal

studies covering six years or more of a given language with as many extraneous factors controlled as possible are needed to give us reliable data in this area.

The second objective of this project was to determine whether the amount of a foreign language learned is dependent upon the intelligence level of the student. On the basis of what is known about the relationship between intelligence and learning in general one would predict that the higher the IQ the better the quality of the learning. At every grade level and in every instance the relationship between intelligence and the learning in Spanish was positively and significantly correlated. This result comes as no surprise and certainly needs no further elaboration here.

Before considering the last three objectives an additional word of explanation concerning interpretation of the findings reported under the column labeled Significant Differences in Tables 6, 7, and 8 is in order. For example, on Table 6 reading across the page on the first entry, i.e., the vocabulary test for the 4th grade group, under the column Significant Differences we see the rubic A > C, L > C. This is to be interpreted in the following way: The measured achievement in vocabulary within the group from which time was deleted in Arithmetic is greater than that demonstrated by a 4th grade control group. Similarly the measured achievement in vocabulary within the group from which time was deleted in language was greater than that demonstrated by a 4th grade control group. In every instance the letters given represent the subject matter areas involved. Thus A = Arithmetic, L = Language, SS = Social Studies. In every instance the letter "C" stands for the appropriate control group.

The third objective was to determine whether or not the time deleted from that normally allotted to certain subject areas, to allow time to teach a foreign language, had any effect upon the achievement in those subjects from which time was taken.

Among all the comparisons made, in only one instance was there any indication that time deletion from a given subject had a negative effect upon achievement in that subject. This instance appeared in grade 5 for the first year of the study in the area of arithmetic. In view of the relatively large number of comparisons made in all subject areas, it is very possible that the significant finding for arithmetic in this one instance might well be a random error of type II.

To carry the explanation further, the reader is invited to turn to Table 6. Under the column for Test Area and Grade refer to Arithmetic grade 5. Reading from this point across the table to the column Significant Differences, we see the symbol C > A. This means that the measured achievement in arithmetic was higher for the control group than was the case with the experimental group which had time taken from its arithmetic instructional period.

All other comparisons, relative to the effect of time deletion and subsequent achievement with reference to the subject concerned, showed that achievement in these areas was either no different or actually greater than the measured achievement of the control group which spent the full time allotment on those subjects.

In the fourth objective an attempt was made to determine whether time deleted from that normally given to certain subject areas to permit time to teach a foreign language had an effect upon achievement in the subject areas taught within regular time allotments. Thus, for example, we sought to determine whether or not time deleted from arithmetic had any effect upon achievements in any of the other areas tested.

(For explanatory purposes, turn to Table 8 - Under the column Test Area and Grade refer to Reading grade 6.) Looking across the table, the headings Arithmetic, Language and Social Studies indicate the subjects from which time was taken. Continuing across the table to the column Significant Differences

we report the following: A > C, SS > C, A > L, SS > L. In this instance we are concerned only with the last two entries, namely A > L and SS > L. Thus, measured achievement in reading was obtained from all groups. The group working with a shortened period in arithmetic scored higher on the average in measured reading achievement than did the group working with a shortened language period. Similarly the group working with a cut in the social studies period achieved higher on the average in reading than did the group operating under a shortened language period.

As a result of the statistical calculations performed, 126 comparisons emerged. Of this number fifteen suggested the possibility that time deletion in one area may have affected achievement in another. To explain these instances of concomitant variation is impossible since no consistent pattern emerged over the three-year period.

The final objective was an attempt to determine whether time deleted from certain subjects to allow time for the teaching of Spanish had any differential effects in measured achievement among the various subject areas involved. Thus, what we ask in this objective is simply this: Does the deletion of classroom time from arithmetic, language or social studies have a greater effect upon achievement in social studies as compared with achievement in language or arithmetic.

It will be noted on Table 6, under the column Significant Differences that in no case are there any differences in measured achievement in social studies grades 4, 5, and 6. On the other hand, in the language area of all three grades, the experimental subgroups scored on the average significantly higher than did the control groups. It would appear then that the shortening of classroom time from the subjects indicated had no effect on measured achievement in social studies and by the same token it seemed to have a strengthening effect upon measured achievement in language. It is apparent that this finding held over all three grades at the end of the first year. We saw no effects at the end of

the second year, but these effects reappeared in the sixth-grade group at the end of the third year. It might be postulated that some transfer may have taken place from the study of Spanish to the work in the English language. The results relative to language, however, are not sufficiently consistent to warrant anything other than a speculative comment. Similarly, in viewing the finding with reference to other subject matter areas over the entire three-year period, the lack of consistence is such as to preclude any generalization or conclusions. There were so many uncontrollable variables as well as so many comparisons involved, that the effects obtained might have been due to random variation.

CONCLUSIONS:

Prior to the attempt to arrive at any conclusions relative to the findings of the study, caution demands that the reader's attention be again directed to the several limitations of the design of the project. Briefly these weaknesses are:

1. Random sampling procedures were not utilized in the selection of the sample subjects. This fact quite obviously puts considerable strain on many of the assumptions underlying the statistical procedures used in the analysis of the data.

2. Much, possibly even crucial information, was lost because it was necessary to use class mean scores rather than scores of the individuals involved in the program. This was done deliberately so as not to stretch the demands of the assumptions underlying the statistics used beyond the breaking point.

3. A total of some 45 classrooms and, therefore, a like number of teachers in six separate schools participated in the Spanish instruction.

Individual differences in such attributes as interest, motivation, enthusiasm and background among the teachers involved was considerable and beyond control.* Moreover, the normal attrition occurring over the three-year period resulted in shifts and changes, not only among the pupils, but teachers as well, which contributed a considerable amount of error.

4. Various mechanical problems, such as failures of the T.V. equipment, audio equipment and the like, did occur from time to time. This had an effect upon the continuity of the program and these events likewise produced error to an unknown degree.

5. Although an effort was made to supervise and to observe the teachers working in the Spanish program, it was impossible to obtain complete coverage. It is not known how faithfully the assigned time allotments were observed. Thus, we have another source of error the extent of which is unknown.

6. A final, though by no means an unimportant, weakness of this project concerns the burden carried by the last two stated objectives of the study. As the statistical evaluations emerged, it became apparent that the elements of information sought in objectives 4 and 5 in particular were so closely interrelated that it was impossible to "see the trees because of the forest." As a result, our findings relative to the last two objectives were inconsistent over the three-year program and considerably "fuzzy" as a result. Had these areas been clearly defined in an operational sense at the outset, the results may have been more meaningful.

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* In an attempt to gain some impressions about the attitudes of teachers concerning the Spanish program, a questionnaire survey was made at the end of each year. These did not require identification and returns overall amounted to almost 100%. The questionnaire data for each year has been summarized and is reproduced in full in appendices D, E, and F. The candid nature of the questionnaire responses are interesting, revealing and worthy of examination.

With the limitations of the study listed above as a backdrop, what conclusions might legitimately be drawn from this project. There are several:

1. Perhaps the most unequivocal of all the results of this study is the finding that the deletion of time from arithmetic, language and social studies to devote to the study of Spanish had no detrimental effect upon measured achievement in the subject areas from which time was taken.

This finding raises some interesting questions. Opinions expressed by many in elementary education, and the literature in elementary education as it relates to time allotment for the various subjects in the elementary curriculum imply that the classroom periods given to these various subjects are somehow tried and true, yes even sacrosanct. The results obtained in this study, referring to subject time allotments and subsequent achievement, leads one to suspect that the pronouncements made by many relative to this issue, may well be based upon tradition and opinion and nothing more. (It would seem that considerable research involving imaginative design is indicated to place these pronouncements on a more secure empirical footing.)

2. Equally certain is the finding that measured intelligence is positively correlated with measured achievement in the learning of Spanish. This, of course, raises a familiar question. Should all pupils be required to study a foreign language if such a program is introduced into the elementary curriculum? One might offer the observation which is by no means original, that for those with learning capacities of a lower level, concentration on the basic skills of reading, spelling, writing and arithmetic might well be far more valuable than would be the case if these youngsters were forced to sit through foreign language instruction with the values and gains to be obtained therefrom of dubious value.

3. The remaining results of this study proved to be of little value. The findings as to the amount of Spanish learned by the students during the first year raises a question about the effects on learning of the maturity dimension and the differential length of exposure to classroom experiences in general. There was, however, a difference at the end of two years of instruction in Spanish. There is nothing in the data which explains these specific findings. A time dimension and pattern of the Spanish instruction might be involved. The findings at the end of the first year, despite statistical significances may not have any practical significance or meaning. Finally, the locally-developed Spanish test may have had weaknesses which produced these results.

If this aspect of the problem has important implications for foreign language instruction, and it might have such implications, more exploration into this area may well be indicated.

In the light of the foregoing, it is quite obvious that this study did not give a complete set of answers to questions which were implicit in the five objectives of the effort. However, the study did, in the opinion of the writers, open up an avenue for further exploration. The finding that the shortening of the classroom period in the various subjects involved has no apparent negative effect on measured achievement in those subjects, is the only instance to our knowledge where such a result was empirically determined. How extensively we might generalize this particular outcome is of course open to question. Nevertheless, it would seem that determination of time given to instruction in the various subjects included in the elementary curriculum might be evaluated from a somewhat more empirical base than is currently being done.

There is little doubt about the fact that the youngsters in the experimental group did learn some Spanish. How much and how thoroughly it was learned

is open to some question because the measuring instruments used were not sufficiently polished or comprehensive for accurate assessment.

Questions relative to the long-range picture seem pertinent here. Granted that the pupils involved did learn Spanish: Will they retain this knowledge? Will they use this knowledge? Will it lead them to further study of Spanish or other foreign languages? This study did not even attempt to seek answers to these questions. They must be obtained through further research.

The results of this study represent a modest beginning into a vast area of curriculum research. It is hoped that others may be stimulated to pursue these problems as a result of this effort.

APPENDIX A

CLASS AVERAGE SCORES FOR FIRST YEAR OF STUDY, 1960-61

TABLE

I Class Average Scores, Vocabulary Section - Iowa Test of Basic Skills, 1960-61 35

II Class Average Scores, Reading Section - Iowa Test of Basic Skills, 1960-61. 36

III Class Average Scores, Language Section - Iowa Test of Basic Skills, 1960-61 37

IV Class Average Scores, Work Study Section - Iowa Test of Basic Skills, 1960-61 38

V Class Average Scores, Arithmetic Section - Iowa Test of Basic Skills, 1960-61 39

VI Class Average Scores, Composite - Iowa Test of Basic Skills, 1960-61. 40

VII Class Average Scores, Stanford Social Studies Test, 1960-61. 41

VIII Class Average Scores, IQs and First Year Verbal Spanish Test, 1960-61. 42

TABLE I

Class* Average Scores, Vocabulary Section - Iowa Test of Basic Skills

1960-61

	Grade 4		Grade 5		Grade 6	
	Vocabulary		Vocabulary		Vocabulary	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	24.24	31.73	29.13	35.06	27.03	31.09
	22.20	29.53	28.59	34.22	27.97	31.88
	14.55	18.87	15.26	19.00	30.73	37.33
	5.91	16.03	22.75	24.50	19.10	22.63
					20.11	23.07
					23.08	22.58
Language**	23.36	29.52	28.85	33.81	31.07	36.54
	20.23	26.19	30.85	36.33	31.67	38.40
	20.77	26.57	25.83	32.70	18.85	22.89
	22.57	29.57	25.34	31.83	15.41	20.41
	25.29	31.17				
	26.41	33.32				
	27.13	32.42				
Social Studies**	14.33	19.15	24.31	31.36	35.73	36.52
	19.41	26.97	25.14	32.59	32.97	36.14
	20.32	25.54	25.08	29.53	27.85	33.88
			15.00	19.00	24.43	30.79
			15.30	18.78		
Control	25.63	28.00	28.06	29.97	29.12	32.66
	25.61	26.29	28.05	29.08	34.24	36.14
	24.00	24.42	31.08	31.42	25.22	26.47
	22.13	23.97	24.47	27.13	32.29	34.86
	22.15	22.74	17.69	22.63	31.57	35.93
	28.96	29.77	28.82	28.18	37.00	38.57
	28.64	30.36	33.38	34.21	29.44	30.11
	28.44	30.89	32.18	33.61	22.53	25.00
	15.64	19.04	30.58	32.58	22.29	24.29
	21.08	22.77	19.83	21.76	20.61	25.75
	15.07	17.33	19.67	21.30	16.60	15.75
	17.39	19.71	19.54	21.46	21.33	22.17
	13.96	18.20	13.68	17.25		
	15.34	17.62	16.67	20.33		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE II

Class* Average Scores, Reading Section - Iowa Test of Basic Skills

1960-61

	Grade 4		Grade 5		Grade 6	
	Reading		Reading		Reading	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	35.39	53.64	48.31	51.94	37.32	44.82
	38.93	47.47	45.56	49.44	41.41	45.38
	21.90	29.03	25.52	32.74	47.80	53.60
	19.23	24.11	36.25	38.58	28.67	34.57
					31.46	37.46
					32.08	35.25
Language**	36.88	46.80	45.12	52.04	43.32	51.79
	34.52	43.68	53.07	59.07	46.03	56.33
	36.63	41.10	43.67	52.77	32.15	32.96
	39.21	47.82	44.72	53.86	26.89	32.78
	42.17	47.42				
	48.00	56.59				
	42.74	51.26				
Social Studies**	22.33	30.44	42.03	49.25	48.64	56.06
	27.48	34.52	44.97	50.19	46.50	51.36
	33.15	39.85	44.13	44.45	42.23	50.85
	31.92	40.24	29.30	32.15	38.07	45.14
			27.52	32.74		
Control	39.88	44.53	45.42	50.72	43.29	46.63
	38.26	42.74	47.59	50.70	47.28	52.22
	35.58	41.33	49.03	53.11	38.38	39.97
	30.69	40.03	38.56	43.44	45.57	46.69
	32.88	38.62	35.50	38.38	44.23	50.27
	41.00	49.73	47.77	50.68	51.77	56.20
	46.36	50.52	53.08	55.17	48.85	45.19
	45.11	51.14	52.82	52.96	30.53	32.31
	23.24	26.72	49.00	52.74	31.77	38.77
	29.23	33.00	33.97	36.90	34.00	39.96
	24.93	31.41	36.26	40.30	24.95	27.90
	26.00	33.85	35.77	37.04	33.37	37.74
	27.20	29.84	27.25	31.43		
	23.25	26.39	31.70	35.17		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE III

Class* Average Scores, Language Section - Iowa Test of Basic Skills

1960-61

	Grade 4		Grade 5		Grade 6	
	Language		Language		Language	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	19.18	30.76	23.76	27.85	19.51	27.11
	19.67	25.80	23.09	27.25	21.11	28.23
	10.19	19.94	11.92	16.54	22.13	28.85
	11.26	15.17	14.92	19.25	16.83	21.17
					15.82	20.46
					14.92	19.58
Language**	18.56	25.96	20.50	26.31	21.61	29.32
	17.30	23.80	26.93	32.30	22.57	30.97
	16.97	21.53	21.00	27.50	15.33	22.04
	18.92	25.31	20.17	25.59	14.85	19.56
	22.65	28.13				
	24.91	31.41				
	22.71	29.04				
Social Studies**	13.39	17.54	21.03	24.61	23.68	31.03
	13.78	18.29	21.54	27.59	24.17	30.83
	16.68	22.85	20.50	24.55	20.62	27.88
	15.73	22.73	14.26	15.11	19.07	24.54
			13.26	18.15		
Control	22.72	23.00	22.36	23.61	22.56	23.66
	21.10	21.50	24.42	24.81	26.29	26.66
	19.67	20.42	25.19	23.46	19.41	20.38
	19.50	19.72	18.84	19.56	23.24	23.50
	17.00	19.30	18.25	19.44	24.87	26.94
	22.88	26.92	23.45	22.91	26.47	27.93
	25.36	26.36	26.88	27.42	25.57	24.25
	25.41	28.04	26.78	27.07	20.00	19.15
	15.16	15.04	26.32	26.13	18.97	18.90
	16.60	17.72	18.39	19.00	19.31	22.66
	14.80	16.14	17.85	20.04	15.90	16.45
	17.29	19.46	18.31	18.96	19.78	19.22
	15.08	16.42	13.68	15.43		
	12.97	15.24	15.47	16.20		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE IV

CLASS* AVERAGE SCORES, WORK STUDY SECTION - IOWA TEST OF BASIC SKILLS

1960-61

	Grade 4		Grade 5		Grade 6	
	Work Study		Work Study		Work Study	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	17.85	24.55	21.85	25.73	19.09	23.88
	18.00	22.07	21.69	24.34	20.78	25.87
	9.94	13.71	13.58	15.08	22.85	27.30
	9.89	12.17	16.33	19.50	16.10	18.70
					15.89	20.25
					16.00	18.42
Language**	17.38	21.15	20.77	23.85	21.29	25.07
	15.65	21.55	25.41	28.78	23.87	29.30
	17.26	20.23	21.83	26.30	14.44	18.52
	18.42	22.04	20.31	24.90	12.52	17.19
	20.33	22.83				
	21.79	26.17				
	20.91	24.45				
Social Studies**	12.69	14.42	20.50	23.61	24.77	27.83
	11.30	14.67	20.62	24.11	23.47	27.72
	16.26	20.79	20.32	21.47	19.81	25.22
	14.29	19.43	14.15	15.48	18.61	21.64
			12.11	14.33		
Control	18.53	21.97	21.76	24.65	22.41	24.56
	19.47	20.77	21.11	26.09	24.13	28.39
	16.92	21.25	23.32	26.68	19.34	21.25
	15.31	18.94	18.13	21.25	21.57	25.14
	16.50	19.94	15.93	18.47	21.74	27.81
	20.46	25.42	20.18	23.45	24.90	28.53
	20.42	24.92	23.27	29.42	21.39	25.14
	21.00	24.89	22.59	26.56	16.55	18.00
	13.24	14.68	20.97	25.29	15.87	19.26
	14.69	16.19	15.50	17.57	16.72	21.45
	11.28	14.52	15.50	19.11	14.00	14.55
	13.67	17.56	14.56	18.04	16.74	18.16
	11.31	14.15	12.71	14.96		
	11.07	12.97	12.50	16.30		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE V

CLASS* AVERAGE SCORES, ARITHMETIC SECTION - IOWA TEST OF BASIC SKILLS

1960-61

	Grade 4		Grade 5		Grade 6	
	Arithmetic		Arithmetic		Arithmetic	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	20.06	25.39	21.21	26.82	18.36	24.85
	18.87	23.13	21.72	25.81	20.05	26.37
	11.81	13.39	12.35	14.19	23.90	28.10
	10.17	11.31	15.45	17.45	16.57	19.73
					15.93	20.86
					18.25	20.92
Language**	18.76	22.44	18.38	23.62	19.46	27.71
	17.74	21.06	23.37	28.85	22.73	30.00
	17.87	21.29	19.60	25.63	13.59	17.93
	19.38	23.12	18.55	22.28	12.15	15.26
	21.00	24.74				
	22.71	27.83				
	21.82	24.59				
Social Studies**	12.67	14.11	19.14	22.19	25.03	30.47
	12.82	14.71	19.86	23.70	24.03	30.14
	14.88	21.38	18.30	21.08	20.30	27.15
	15.54	19.49	13.21	14.21	17.86	21.54
			11.33	13.96		
Control	18.09	21.59	19.14	24.19	19.98	26.56
	16.61	21.32	19.70	26.76	22.32	29.73
	17.58	20.17	19.61	25.22	19.19	24.63
	16.34	20.22	15.34	21.81	23.34	26.46
	16.50	21.26	14.50	19.94	19.32	27.71
	20.65	26.00	19.10	24.90	21.50	28.33
	20.67	25.17	21.38	26.50	20.55	25.07
	20.70	26.52	18.86	24.18	15.70	19.33
	11.92	17.13	18.63	26.00	15.30	19.41
	13.04	17.65	13.62	17.48	14.52	23.52
	10.77	16.50	14.00	21.86	13.70	18.00
	13.04	18.52	13.31	18.54	17.95	22.15
	11.96	18.08	12.74	16.56		
	10.64	13.64	11.30	15.97		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VI

CLASS* AVERAGE SCORES, COMPOSITE - IOWA TEST OF BASIC SKILLS

1960-61

	Grade 4		Grade 5		Grade 6	
	Composite		Composite		Composite	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	23.33	33.21	29.00	33.47	24.47	31.03
	23. 60	29.60	28.22	32.34	26.09	31.86
	13.68	18.29	15.70	19.70	28.41	34.85
	11.40	15.83	21.36	23.82	19.37	23.37
					19.86	24.32
					20.83	23.42
Language**	22.88	28.76	26.69	32.00	27.39	34.11
	21.34	27.50	31.93	36.93	29.40	36.90
	21.81	25.90	26.40	32.87	18.96	22.93
	24.04	29.68	25.86	31.69	16.33	21.15
	26.38	30.92				
	27.92	34.83				
	27.04	32.21				
Social Studies**	15.13	19.00	24.97	29.75	31.18	36.79
	20.15	26.38	25.91	31.32	30.33	35.14
	19.54	25.49	25.76	28.24	25.78	32.37
			16.29	19.14	23.64	28.71
			15.89	19.56		
Control	24.91	27.75	27.27	30.73	27.54	30.93
	24.73	26.93	28.19	31.19	30.78	34.86
	22.83	25.58	29.32	32.05	24.38	26.56
	20.75	24.56	23.06	26.66	29.24	31.36
	21.00	24.35	20.20	23.60	28.37	33.63
	26.77	31.46	28.36	30.05	32.23	35.90
	28.60	31.52	31.25	34.58	27.76	30.40
	28.14	32.50	30.61	32.93	21.34	22.86
	15.88	18.42	29.00	32.37	20.94	24.31
	18.92	21.62	19.69	22.45	21.04	26.47
	15.85	19.89	20.29	24.29	17.20	18.55
	18.47	22.68	20.22	22.96	22.28	24.56
	15.72	19.36	16.22	19.30		
	14.72	17.14	17.60	20.73		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VII

CLASS* AVERAGE SCORES, STANFORD SOCIAL STUDIES TEST

1960-61

	Grade 4		Grade 5		Grade 6	
	Social Studies		Social Studies		Social Studies	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	43.97	61.67	65.94	75.15	60.15	68.18
	40.33	50.67	61.88	69.88	63.29	69.83
	26.87	34.58	35.46	44.23	49.63	56.53
	27.43	34.69	48.58	56.08	53.36	63.32
					47.00	53.25
Language**	39.68	55.11	57.96	64.77	66.38	75.45
	36.16	49.58	64.11	74.41	72.80	80.73
	36.23	48.97	58.37	68.80	54.08	63.92
	34.92	53.12	55.79	64.24	45.63	54.30
	45.20	59.00				
	49.96	65.83				
	49.48	60.78				
Social Studies**	29.83	38.25	54.54	62.49	73.31	79.00
	29.56	38.26	52.89	63.33	69.72	77.25
	38.71	51.03	55.47	58.22	64.81	72.70
	35.51	48.03	32.07	38.89	60.47	68.71
			37.07	48.56		
Control	40.63	54.60	54.32	75.35	64.54	72.10
	43.68	52.35	58.20	68.29	69.89	78.92
	40.92	50.58	58.43	66.46	57.13	65.22
	36.42	47.03	48.25	60.19	66.88	72.76
	37.44	44.53	36.81	52.75	70.13	80.77
	45.27	58.81	52.74	66.65	74.00	82.59
	50.17	60.67	63.28	69.84	65.27	72.30
	49.68	56.00	65.00	72.31	51.79	60.97
	26.88	37.32	57.50	68.37	61.84	68.26
	33.76	40.12	41.37	53.19	56.14	68.00
	25.63	38.42	41.93	56.50	43.74	50.42
	32.16	41.24	41.60	51.56	56.83	68.72
	22.73	32.77	33.68	42.07		
	26.82	39.32	36.27	42.27		

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VIII

CLASS AVERAGE SCORES, IQs AND FIRST YEAR VERBAL SPANISH TEST*

1960-61

	Grade 4		Grade 5		Grade 6	
	IQ	Spanish	IQ	Spanish	IQ	Spanish
Experimental	109.21	27.47	112.24	30.61	106.29	43.34
	107.13	37.21	112.12	36.27	107.18	32.41
	95.39	66.17	92.22	69.88	109.48	55.35
	95.32	74.26	101.83	50.67	98.13	54.37
	111.47	47.79	109.12	36.04	98.10	49.54
	109.21	51.73	113.85	22.80	96.83	55.08
	106.28	49.41	109.20	22.27	106.57	45.64
	112.20	47.46	109.48	27.93	113.30	30.67
	114.60	23.71	104.69	50.13	99.19	58.88
	112.33	21.83	104.59	57.03	95.93	49.44
	113.40	22.75	105.00	56.89	114.16	46.00
	96.63	71.33	96.00	61.00	114.76	48.65
	95.55	60.00	96.57	56.31	103.07	45.37
	106.03	43.94			103.11	44.22
	104.53	56.73				
	105.44		110.43		103.32	
Control	104.68		110.84		105.32	
	105.17		113.76		102.03	
	102.34		102.03		108.49	
	104.24		100.00		106.69	
	111.62		105.43		111.68	
	110.52		110.23		104.26	
	109.50		109.79		99.42	
	96.52		109.84		97.19	
	101.73		101.69		97.24	
	95.24		97.96		94.65	
	99.50		100.19		100.45	
	96.60		97.61			
	96.21		95.20			

* The Spanish test scores given here are based on the number wrong rather than the number correct, and therefore, a low rather than a high score is considered best.

APPENDIX B

CLASS AVERAGE SCORES FOR SECOND YEAR OF STUDY, 1961-62

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TABLE I

CLASS* AVERAGE SCORES, VOCABULARY SECTION - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Vocabulary		Grade 6 Vocabulary	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	24.13	34.90	28.70	34.80
	20.75	28.08	28.30	35.37
	14.12	18.00	15.57	20.29
	5.81	16.74	24.27	28.55
Language**	23.70	31.43	28.22	35.35
	20.66	27.45	30.45	36.77
	20.77	25.85	25.44	34.37
	21.81	29.69	26.08	34.12
	25.23	31.91		
	26.10	35.71		
	27.09	34.30		
Social Studies**	15.32	21.72	24.39	31.19
	14.52	21.39	25.97	31.77
	18.43	26.23	14.36	19.23
	20.45	28.32	14.43	20.96
			25.00	31.23
Control	26.29	34.45	28.56	35.38
	24.25	32.00	28.09	34.09
	24.18	31.36	30.89	36.63
	22.19	29.12	25.88	34.16
	22.44	31.15	17.69	28.44
	27.91	35.00	29.70	34.95
	28.45	37.05	33.18	38.91
	27.46	38.41	32.00	39.52
	15.59	20.41	31.44	36.74
	20.83	26.78	20.27	25.54
	16.04	25.54	19.57	26.57
	17.00	24.65	20.78	25.17
	13.60	20.40	13.52	18.13
	15.58	21.88	17.58	23.50

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE II

CLASS* AVERAGE SCORES, READING SECTION - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Reading		Grade 6 Reading	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	35.43	58.53	47.83	48.47
	36.25	49.08	44.70	49.97
	20.96	31.38	27.40	28.67
	18.81	28.30	37.82	39.27
Language**	37.39	49.61	44.13	50.87
	34.97	46.14	51.59	54.91
	36.12	45.27	44.00	51.11
	38.65	46.96	47.68	50.68
	42.18	48.14		
	47.57	58.71		
	42.45	56.41		
Social Studies**	23.88	42.28	41.78	44.44
	29.26	38.48	46.09	47.91
	31.70	46.40	44.06	42.77
	31.65	47.00	25.55	29.50
			26.21	32.11
Control	40.77	53.84	45.71	50.56
	37.48	51.55	47.31	51.09
	36.45	48.00	48.57	5 3.43
	30.65	44.00	40.12	46.08
	32.74	49.93	35.50	38.69
	38.35	53.09	49.55	50.35
	46.41	57.23	52.41	53.86
	43.69	53.54	52.37	56.52
	23.00	34.05	49.78	51.15
	28.39	42.17	34.04	36.46
	26.17	39.83	36.04	40.17
	24.60	41.25	37.13	36.48
	27.05	36.50	26.57	30.65
	23.81	34.08	33.00	37.54

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE III

CLASS* AVERAGE SCORES, LANGUAGE SECTION - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Language		Grade 6 Language	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	19.77	29.70	23.53	25.90
	19.25	25.67	22.97	25.70
	9.88	15.73	11.90	16.71
	11.22	15.00	15.64	20.73
Language**	18.78	24.91	21.00	26.18
	17.61	22.43	26.74	29.48
	16.44	21.19	21.04	24.22
	18.17	22.54	21.16	25.64
	22.57	26.67		
	24.67	29.38		
	22.52	28.00		
Social Studies**	13.28	17.12	20.97	23.46
	14.83	19.09	22.14	24.71
	16.17	21.17	20.09	23.24
	14.58	22.03	13.68	16.05
			12.79	17.50
Control	23.13	27.48	22.76	28.82
	20.62	25.62	24.29	28.97
	20.45	26.27	25.11	28.69
	19.96	23.96	19.28	24.52
	17.74	24.56	18.25	23.19
	22.30	28.26	24.20	27.10
	25.23	30.09	26.43	31.26
	25.19	29.50	26.81	32.19
	14.68	17.95	26.63	29.26
	15.77	22.32	18.40	23.24
	15.17	21.83	17.73	23.00
	15.63	21.80	18.57	21.30
	15.25	19.35	13.96	18.39
	13.50	19.08	16.00	19.71

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE IV

CLASS* AVERAGE SCORES, WORK STUDY SECTION - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Work Study Initial Test	Grade 5 Work Study End-of-Year Test	Grade 6 Work Study Initial Test	Grade 6 Work Study End-of-Year Test
Arithmetic**	18.23	29.80	21.50	26.70
	17.33	26.08	21.30	25.33
	9.85	15.04	13.19	16.62
	9.89	13.19	16.64	21.82
Language**	17.48	25.61	20.77	26.36
	15.57	23.77	25.22	28.74
	16.89	21.89	22.19	27.62
	18.25	23.17	21.48	26.20
	20.18	25.95		
	21.61	29.35		
	21.05	28.57		
Social Studies**	13.16	17.48	20.32	24.81
	12.17	19.70	20.76	24.88
	15.70	23.80	20.40	23.06
	13.71	23.42	13.95	14.64
			11.68	15.11
Control	18.94	25.74	21.91	26.14
	19.25	22.89	21.35	27.44
	17.18	22.55	23.11	27.00
	14.88	21.46	18.56	24.28
	16.74	23.07	16.00	22.00
	19.35	25.57	20.70	26.75
	20.00	27.29	23.13	28.83
	20.73	26.54	22.81	28.65
	13.05	17.27	21.30	25.41
	14.57	20.74	15.44	19.68
	11.58	19.17	15.42	20.50
	12.75	19.25	14.14	17.55
	11.80	18.15	13.27	16.68
	11.36	16.76	13.08	17.50

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE V

CLASS* AVERAGE SCORES, ARITHMETIC SECTION - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Arithmetic		Grade 6 Arithmetic	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	20.53	29.27	20.90	27.07
	18.33	26.75	21.30	27.27
	11.68	14.52	12.33	18.29
	9.96	14.33	15.91	21.82
Language**	19.13	25.13	18.64	26.82
	17.73	24.03	23.43	30.61
	17.25	22.96	19.77	27.31
	19.13	24.13	19.68	27.64
	21.05	26.76		
	22.48	29.74		
	21.90	29.29		
Social Studies**	13.04	17.92	19.14	25.65
	13.74	18.61	20.37	25.86
	14.30	22.33	18.51	24.06
	15.03	22.42	12.96	14.91
			11.04	15.71
Control	18.42	24.45	19.43	27.49
	16.52	22.93	19.66	27.00
	18.00	22.27	19.46	28.06
	16.67	20.37	16.20	24.76
	16.85	24.26	14.50	24.69
	19.87	24.17	19.68	28.11
	20.19	25.76	21.48	28.39
	20.42	26.23	19.26	27.81
	11.68	16.41	18.63	26.48
	12.70	19.52	13.77	19.23
	10.04	17.83	13.92	20.71
	12.05	19.15	12.67	18.00
	12.50	17.25	12.91	17.39
	11.17	15.42	12.08	18.13

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VI

CLASS* AVERAGE SCORES, COMPOSITE - IOWA TEST OF BASIC SKILLS

1961-62

	Grade 5 Composite		Grade 6 Composite	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	23.63	36.47	28.53	32.57
	22.42	31.17	27.80	32.13
	13.40	19.08	15.81	20.14
	11.19	17.44	22.09	26.64
Language**	23.46	31.46	26.95	33.27
	21.29	28.74	31.18	35.82
	21.52	27.52	26.65	33.00
	23.58	29.50	27.24	32.80
	26.36	31.95		
	27.61	36.09		
	27.00	36.26		
Social Studies**	15.68	21.72	25.19	29.68
	16.78	23.52	27.03	31.24
	19.37	27.97	25.38	28.50
	19.26	28.52	15.74	18.70
			15.21	20.25
Control	25.45	33.16	27.57	33.57
	24.10	30.97	28.31	33.71
	23.36	30.09	29.11	34.86
	20.65	27.62	24.00	30.60
	21.33	30.56	20.38	27.56
	25.52	33.26	28.98	33.60
	28.45	34.82	30.87	36.30
	27.46	34.04	30.59	37.00
	15.50	21.23	29.48	33.81
	18.43	26.13	19.77	24.69
	15.88	24.75	20.18	25.63
	17.19	25.81	20.41	23.36
	15.90	22.15	16.13	20.30
	15.36	22.44	18.46	23.17

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VII

CLASS* AVERAGE SCORES, STANFORD SOCIAL STUDIES TEST

1961-62

	Grade 5 Social Studies		Grade 6 Social Studies	
	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
Arithmetic**	44.74	77.07	65.27	78.10
	40.15	63.15	60.93	76.03
	26.54	47.38	35.14	53.57
	27.81	41.35	49.73	63.73
Language**	39.52	66.48	58.43	75.43
	36.43	65.40	63.74	80.30
	35.64	62.11	58.48	76.93
	36.50	65.92	58.20	74.52
	45.96	67.48		
	48.61	78.13		
	48.59	74.68		
Social Studies**	30.20	49.08	54.54	70.54
	32.26	51.13	55.23	71.97
	37.90	62.73	55.82	68.24
	35.45	61.74	31.35	53.83
			35.64	56.68
Control	41.30	68.90	55.03	79.47
	42.66	65.90	58.42	76.06
	42.64	63.36	58.00	76.83
	35.24	57.00	49.28	71.56
	37.22	63.22	36.00	63.67
	42.61	64.04	53.95	73.05
	50.05	69.62	62.50	82.23
	49.17	70.88	65.72	84.24
	27.36	49.64	59.48	78.04
	34.52	57.22	41.31	63.54
	25.60	51.60	42.33	62.79
	30.33	57.72	41.83	61.11
	23.12	47.00	34.00	52.57
	28.79	48.17	36.75	59.83

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VIII

CLASS AVERAGE SCORES, IQs AND SECOND YEAR SPANISH TEST

1961-62

	Grade 5		Grade 6	
	IQ	Spanish	IQ	Spanish
Experimental	111.04	41.52	104.22	44.27
	110.00	37.71	104.11	40.97
	105.57	37.14	104.77	44.20
	110.35	40.73	111.73	48.40
	114.22	51.52	111.13	47.17
	112.04	53.17	92.81	35.33
	113.30	53.35	102.45	39.73
	97.12	30.32	109.65	43.13
	96.39	30.48	114.29	49.42
	109.17	47.83	96.26	35.39
	107.00	44.69	95.71	34.00
	96.50	33.96	108.89	42.89
	96.30	32.11	110.92	46.20
	105.40	34.67		
	104.81	34.74		
Control	106.26		111.23	
	104.14		110.75	
	105.36		113.39	
	102.70		103.15	
	104.07		100.00	
	109.39		105.90	
	110.86		109.87	
	108.85		110.11	
	96.50		110.37	
	102.22		101.46	
	96.00		97.67	
	98.30		99.74	
	97.60		94.17	
	97.54		95.13	

APPENDIX C

CLASS AVERAGE SCORES FOR THIRD YEAR OF STUDY, 1962-63

TABLE

I Class Average Scores, Vocabulary Section - Iowa Test of Basic Skills, 1962-63 54

II Class Average Scores, Reading Section - Iowa Test of Basic Skills, 1962-63. 55

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VIII Class Average Scores, IQs and Third Year Spanish Test, 1962-63 61

TABLE I

CLASS* AVERAGE SCORES, VOCABULARY SECTION - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of Year Test	Initial Test	End-of Year Test
24.42	40.13	23.41	35.14	15.48	26.05	26.29	35.06
19.33	33.67	20.44	32.04	14.60	25.20	25.68	32.16
14.40	20.75	21.09	32.04	18.62	32.77	24.18	32.09
5.40	18.95	21.38	34.79	19.29	32.07	22.27	28.11
		25.23	36.36			22.08	32.08
		25.83	37.39			27.45	37.18
		27.09	38.57			28.95	39.84
						28.09	37.59
						15.70	22.85
						22.44	28.94
						15.24	22.09
						18.88	25.13
						13.75	20.25
						15.05	20.50

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE II

CLASS* AVERAGE SCORES, READING SECTION - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
36.67	61.63	37.05	50.50	24.05	39.19	40.77	48.29
35.00	48.67	34.80	46.64	29.15	39.50	38.00	47.44
19.60	32.30	36.83	46.96	32.31	47.00	36.45	46.09
19.75	28.80	38.04	47.92	30.32	47.93	31.85	42.54
		42.18	50.32			32.24	44.92
		47.56	59.00			37.18	51.91
		42.45	56.82			46.21	57.58
						43.73	50.64
						23.05	31.80
						29.94	37.94
						25.45	34.55
						24.40	37.93
						28.50	33.19
						24.86	30.41

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE III

CLASS* AVERAGE SCORES, LANGUAGE SECTION - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
20.04	34.54	18.45	28.36	13.43	21.29	23.13	26.10
17.78	27.22	17.63	26.25	15.10	22.50	20.52	25.48
9.50	21.90	16.78	24.91	16.27	25.42	20.45	25.90
11.65	17.60	17.77	27.09	14.96	25.21	20.04	23.04
		22.57	31.14			17.56	23.52
		24.72	33.06			22.19	27.48
		22.52	31.70			25.05	28.10
						24.54	27.75
						14.55	17.50
						15.83	20.72
						14.81	19.43
						15.79	20.50
						16.38	19.19
						13.82	16.91

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE IV

CLASS* AVERAGE SCORES, WORK STUDY SECTION - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
18.04	32.13	17.23	25.55	13.33	20.05	18.94	25.90
16.67	26.44	15.36	25.12	11.85	20.95	19.25	24.54
9.95	17.21	17.17	22.88	15.77	25.54	17.18	24.73
10.05	14.62	17.86	23.23	13.21	23.25	15.27	23.65
		20.18	27.45			16.72	25.32
		21.10	30.90			19.14	28.19
		21.05	28.95			19.90	29.95
						20.29	27.63
						13.05	17.90
						14.89	23.89
						11.41	17.86
						12.60	19.93
						12.44	16.89
						11.59	13.50

* The Average for a group of students regularly scheduled with one teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE V

CLASS* AVERAGE SCORES, ARITHMETIC SECTION - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
20.30	32.30	18.95	26.59	12.81	19.62	18.42	26.87
17.11	26.33	17.64	24.16	13.65	21.25	16.91	25.87
11.35	14.85	17.50	24.58	14.62	25.19	18.00	27.27
9.90	14.30	18.86	26.59	15.00	23.14	16.73	24.65
		21.05	28.10			16.68	26.56
		22.30	29.95			19.87	28.17
		21.90	28.86			19.84	31.00
						19.96	29.50
						12.00	18.63
						13.44	21.83
						9.95	18.62
						11.93	20.00
						13.56	18.31
						10.64	15.36

* The Average for a group of students regularly scheduled with the teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VI

CLASS* AVERAGE SCORES, COMPOSITE - IOWA TEST OF BASIC SKILLS

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
23.70	40.04	24.27	33.30	15.45	24.70	25.45	32.42
21.22	31.89	21.38	31.08	16.75	26.00	24.36	31.04
12.89	21.28	21.75	30.38	19.62	31.27	23.36	31.27
11.61	18.89	23.21	32.21	18.57	30.32	21.15	27.96
		26.36	34.68			21.08	30.52
		27.30	37.45			25.05	34.90
		27.00	36.96			28.28	37.67
						27.59	34.73
						15.79	22.53
						19.33	26.94
						15.86	22.19
						17.45	25.73
						16.81	21.63
						15.32	19.32

* The Average for a group of students regularly scheduled with the teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VII

CLASS* AVERAGE SCORES, STANFORD SOCIAL STUDIES TEST

1962-63

Grade 6

Arithmetic**		Language**		Social Studies**		Control	
Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test	Initial Test	End-of-Year Test
45.43	82.43	39.25	74.42	30.43	62.05	41.30	76.67
33.78	71.11	37.72	70.60	30.58	60.00	42.68	75.28
26.55	57.00	35.63	69.25	38.35	73.38	42.64	74.82
27.76	50.48	36.00	74.71	34.14	67.93	36.44	71.56
		45.96	75.83			36.72	74.48
		48.85	83.20			42.61	80.83
		48.59	79.86			49.79	85.21
						47.27	82.59
						27.90	59.45
						35.17	68.56
						25.68	58.74
						27.29	64.93
						24.50	55.44
						28.73	55.91

* The Average for a group of students regularly scheduled with the teacher at a particular time.

** The experimental sub-groups had time taken from the area indicated to allow time for teaching Spanish.

TABLE VIII

CLASS AVERAGE SCORES, IQs AND THIRD YEAR SPANISH TEST

1962-63

Grade 6

Experimental				Control	
I.Q.	Spanish Test	I.Q.	Spanish Test	I.Q.	I.Q.
110.46	78.54	97.00	60.79	106.26	107.40
111.48	71.65	110.00	98.05	103.60	96.45
106.88	73.71	103.11	89.56	105.36	103.00
110.42	75.21	96.53	66.35	102.69	95.59
114.22	105.22	98.12	61.82	103.60	99.25
111.60	106.40	104.90	71.00	109.39	97.88
113.30	105.35	104.08	71.08	111.00	93.45
97.53	63.58				

APPENDIX D

A Summary of a Questionnaire Answered by Participating Teachers at the Completion of the First Year of T.V. Spanish Presentation, 1960-61 65

A Summary of a Questionnaire Answered by Participating Teachers at the Completion of the First Year of TV Spanish Presentation. 1960-61.

- - - - - -

1. Was the presentation of the lessons over T.V. satisfactory?
   Yes 42 No 3

2. Was the reception always satisfactory?
   Yes 33 No 8

3. Do you feel that the time of the lessons interfered with regular classes?
   Yes 10 No 33

4. If the answer to #3 was "yes" explain:

   I would have preferred it to be at 9:00 a.m., 1:15 p.m. or last period.

   Preference - first or last period of given period.

   The beginning or end of an afternoon or morning session would be better.

   Difficult to stop for it when it came.

   Tape recorders plus television sets were shared by three rooms. Music teacher's schedule also had to be followed.

   Made programming difficult along with arithmetic and map study T.V.

   Often tape was late, had to be shared, mixed up schedule, if each teacher had own tape recorder it would be perfect.

   Too many interruptions always lowers learning efficiency and program assumes more importance than value because of its arbitrary time.

   I feel any class that must start at an exact time interferes with one's schedule which must fluctuate somewhat.

   If there were interruptions in our daily program the Spanish lesson would never be missed, no matter how important the work was at the moment in other classes.

5. Were the audio tapes an effective way to supplement the T.V. presentation?
   Yes 45 No 1

6. Did the interest of the children remain constant?
   Yes 13 No 32

7. If the answer to # 6 was "no" what accounted for the drop in interest?

They would like more guests - different faces.

Natural "leveling off" of enthusiasm. No teaching in classroom to strengthen skills learned.

Lack of direct contact, subject matter of no interest to them and use.

At time subject matter - lack of direct contact.

No carry over. (2)

Lack of achievement and difficulty in recitation.

Lack of motivation for lessons when they could not understand "Don Miguel."

Increase in difficulty.

Too difficult.

If lesson presented was difficult, interest level dropped immediately.

Their interest varied with the difficulty or length of sentences.

They were restless because the presentation wasn't lively enough.

I have many children below grade level. Their interest depended on the difficulty of the lesson.

After a few weeks the children lost interest because too many words were introduced.

Program geared to only one level of learning. Slow learners could not grasp. Also because of my lack of background it was an isolated learning process.

As the program became harder, the interest of the slower students fell off.

As it became difficult interest dropped.

He failed to repeat necessary items which they missed, hence they got behind and gradually lost interest.

For some it was very interesting, others were just discipline problems - poor attention and listening.

Presented new words too often, did not know what he was saying.

At times too much new material was introduced.

Particular lessons at the "picnic" and the "television program" were drawn out too long.

Had to listen so keenly constantly so as to follow. The period was rather difficult for those who weren't interested.

In many cases it was constant. In others it tapered off toward the last two months.

They got tired of the "picnic" and began to lose interest.

At times the children just were not interested in Spanish.

Not enough application.

Continuous distraction in order to make T.V. program a success, the teacher must "police" the class.

8. Were the lessons stimulating to you?

Yes 42 No 2

9. Do you feel that your lack of background in Spanish seriously handicapped you or your children?

Yes 17 No 2

10. Do you feel that the subject area from which the time was taken suffered?

Yes 21 No 20

11. What was your reaction to the lessons presented for teachers on Wednesdays from 4:00 to 4:30?

Highly desirable 5
Profitable 29
Unsatisfactory 8

12. What suggestions would you have for changing the program next year?

The teacher programs could be less technical. Less repetition of well learned facts would help the programs move faster.

More action programs such as the "parties" Dr.'s visit, live animals.

A period allotted for carry over would be beneficial with a little time deleted from each of several subjects.

Coverage of all new material in English before it is presented in Spanish.

Time of day it is presented. Additional time in classroom or special sessions for interested after school, and more visitors and animation on program.

If we could use extra time to carry over some of the ideas, children would be more stimulated.

It depends on the type of child found in the school. As the lessons advanced it was far too difficult for the slow learner.

Material presented too rapidly for our type of learner - low average group. More drill and repetition at a slower speed needed by our youngsters.

Our children could not maintain the pace unaided by supplementary drill and work.

Please do not start until we are organized. Repeat old lessons more often.

I question the value of trying to teach Spanish to the very slow learner.

Please introduce less words. We need more review lessons. Please follow the plans in the teachers' guide. I feel we need written lessons.

It would be much better if the material was covered more slowly.

Allow time for review and drill. Use of written material.

May we have time other than just broadcast time for extra work and drill?

I feel it should be given to one group so there isn't such a wide range in abilities. I also believe Mr. Hathaway went too fast and didn't rely enough on repetition.

Be sure teachers know what is being said so that T. V. can help with translating into English when needed.

Necessary information can be presented in a shorter period of time.

Less on the grammar part as a full understanding of it needs a great deal of time spent on it, and with little sections put in, as they were this year, no understanding takes place.

More English especially when you use sentences so we have more of an idea of what is being said.

While I am in favor of a Spanish program and while I know that my class was good in language, it would be difficult to assume that another 15 minutes a day would not have brought about better results in language.

If I had Spanish before I would perhaps have had some constructive changes, but as a novice I felt the program was excellent.

Could Mr. Hathaway meet with the teachers of Spanish during the fall area meetings? Perhaps the teachers would feel more confident after a refresher session.

Since the children are not permitted to see the written symbol, I believe the instructor could speak the English words unless there is an object at hand.

Perhaps more English could be spoken. Review the songs more often.

The preview could have been more for language than for Social Studies.

More English explanation in the conversation. Some written expressions of words could have been written.

Allow more time.

13. Do you feel that the test was too difficult?
Yes 1 No 43

14. Do you feel that the test materials as presented were interesting to the students?
Yes 42 No 1

15. Do you feel that the directions as presented in the teacher's instructions for administering the test and on the tape were clear?
Yes 45 No 0

16. Do you feel that the test items were clearly presented?
Yes 43 No 1

APPENDIX E

A Summary of a Questionnaire Answered by Participating Teachers at the Completion of the Second Year of T.V. Spanish Presentation, 1961-62 73

A SUMMARY OF A QUESTIONNAIRE ANSWERED BY PARTICIPATING TEACHERS AT THE COMPLETION OF THE SECOND YEAR OF T.V. SPANISH PRESENTATION, 1961-62

TWENTY-TWO RETURNS

1. What background in foreign language do you bring to this class?

a.	Spanish	6
b.	German	4
c.	Latin	5
d.	Greek	1
e.	Swedish	3
f.	French	1

2. Has this program motivated you to want to learn more about a second language?

Yes 20 No 2

3. Have you developed any skills through these presentations?

Yes 18 No 4

4. Has your interest been maintained?

Yes 15 No 7

5. Do you feel it would be beneficial to continue the program after our three-year study is completed?

Yes 11 No 4 For some 7

6. Was interest in the program sustained?

Yes 7 No 10 Some 4

a. By children of all levels of ability?

Yes 4 No 9

Not by those of lower ability 6

7. If interest were not sustained, what factors were responsible?

It was more difficult to follow sentences than it has been in learning names of objects.

Gave too much new material at a time before they really were ready, went too fast.

Got lost; Absence; Level of ability.

Programs themselves, material about which talked, frustrated by material being too involved and too fast.

For the children who are retarded in English and who are below average, it was too difficult.

My background of the language. Presentation of materials was too fast.

Lack of background on part of teacher. Tapes presented materials too fast.

Conversations moved too fast for comprehension.

Sentence conversations became too difficult to follow. Dramatizations not too clear in children's mind.

They didn't learn enough, or program wasn't carried over after T.V. or tape.

Some presentations were somewhat dull, others above the children's comprehension. Also lack of parents' interest has surely influenced some childrens' interest.

Large blocks of time needed to succeed in a foreign language, this program does not include this. Too difficult except for high ability level.

Too many phrases without complete mastery of necessary vocabulary. Too little use of classroom teacher. Instruction pace too fast. Lack of interpretation regarding difficult phrases and words.

It became too complex, too difficult to follow.

Need classroom teacher motivation at all times to maintain any T.V. listening.

No application. T.V. is impersonal. No ready source of information and help.

Permission for teachers to have entered the first year program as she saw necessary with her own particular class.

Children coming into the school without any Spanish background.

8. Which level of abiiity was most difficult to motivate?

Followed the same pattern as in other subjects.
The eager to learn and attentive in other classes showed the same interest in Spanish

Very low and some very high.

Lower level 10

9. Which parts of the presentation were more interesting to the children?

Since receiving the Spanish workbooks, children have liked Spanish better.

Where actually participating.

When it had to do with geography.

Dramatizations using people and props.

T.V. and workbooks, numbers (counting)

The personality of the teacher.

One person being called on to repeat something. When pupils on T.V. acted out skits. Working with manuals. Holidays in other countries.

Anything illustrated or dramatized and seeing the printed words.

Picnic films, songs, guests, maps, magic box with live animals, Christmas customs stores

Dialogues and conversations

T.V. presentations where children were present on the program.
2

Use of concrete objects.

History, festivals, vocabulary review, etc.

Songs, children participation, picnic, interviews with foreigners.

The skits which they could do later and the workbook but there should have been an English vocabulary with the workbook.

Workbook and teacher classroom analysis.

T.V. using animals and objects.

T.V. presentations.

10. Which parts were most deadening?

Puppets - just conversation when they did not know what was being said.

Conversation - questions and answers.

Strictly drill or lecture programs.

Tapes 4

Tapes and some conversation materials on T.V.

As in all efforts, the effort to drill.

Long assignments in workbook. Map work on other countries.

Conversations without the English interpretation.

Doll house, didn't show written work long enough to be digested, tapes harder to follow than T.V. Long sentences and conversations. Children were unable to follow.

Conversation or questions when they were to answer without help.

Generally the tape or T.V. Pace and music, the kitchen, bedroom, living room introductions.

Long phrases, picture interpretation.

Questions and answers in dialogue, map work, long phrases, parts of the workbook.

The independent lessons, those on Central and South America, finally did show their credit when we studied the countries.

Listening to the Garcia family in skits, seemed to talk too rapidly for our proficiency.

11. Did your children profit from the program of Spanish instruction?

Yes 13

No

Yes, I definitely think so. Naturally when they no longer are on the experimental program some follow-up teaching can be done to make it more meaningful.

Small minority.

a. How much?

They are not using Spanish with each other or at home as much as I expected. However, I feel they have an excellent foundation in the language.

Slightly on the average.

Little 2

Depends on the individual.

Depends on the teacher and type of student.

About one-third of the class said they were happy to have had it. Six want to take it in high school.

Some.

Some have benefited very much, others little. The tests should give an indication of the amount.

A little.

Enough so most of them are interested enough to want to continue it.

Learned a great deal of vocabulary.

Some have carried it on at home with parents. Some bought records.

b. In what ways?

Listening - word diagnosis

Enrichment of studies - understanding of other people number system.

Hearing the spoken language, learning some background of Spanish speaking countries.

They became aware of some words and of the South American countries.

Depends on the individual.

Listening skills, communication.

Many of them enjoy speaking it and using the words they learned.

Realization of proximity of Spanish speaking nations to us. Appreciation and tolerance of their language and customs.

They are able to recognize some words and phrases encountered in reading and watching T.V. etc. Better understanding of Spanish speaking countries and their people.

Recognize or identify objects around them, and names of people.

Several children have acquired a good Spanish reading, speaking and understanding vocabulary, several are anxious to start third year.

Know some basic vocabulary, background, history, could enhance social studies and English by using as reference material.

They found it very helpful in studying the countries of Mexico, Central and South America - saw a carryover.

From the workbooks and class repetition plus T.V.

Some are disappointed not to be able to go on with it in seventh grade.

12. Have the children developed skills necessary to handle Spanish?

Yes	5
No	6
Some have	11

13. What effect has the deletion of time from the basic subject area had on that area?

We haven't been able to cover as much material as usual.

Not any so far as I can see 5

None

Pressure on teacher to teach what is necessary to level expected.

Very little - it is difficult to limit Spanish to a certain period of time.

Our children needed the time for essential drill on academic subjects.

Hard to determine. Some bad effects.

We can always find some time for something we want to do.

Time taken from language. I don't feel that it hindered us in language.

Hard to determine.

No apparent effect, although I must admit to often not cutting it short when the time was used up.

We used the extra five minutes too when our school day was extended for we needed more time in that area. Reading and literature.

Time lost was made up with more intense teaching.

None. It was difficult not to compensate time loss with more intense teaching.

Ours has been language. We use language in all of our other subjects so often that I can't really say that there has been any effect. I teach it as in report work. I realize a period is necessary for the basic teaching of it which we had.

A great deal - actually took thirty minutes per day. Each T.V. lesson only a starter in order to learn. Felt without classroom help the pupils would have been lost with just fifteen minutes on T.V.

We are behind.

This year we were not able to finish text without just skimming over the last chapter.

14. Could you indicate weaknesses in this method of presentation?

Go more slowly, cue more live dialogue, more repetition so they become familiar.

Absence, can't get to them. Interruptions - go to Junior High School etc., get bored.

None - can't have program without knowledge of program.

None

Some materials were run-on and carried forth too rapidly.

Tapes were too fast - material was presented too rapidly.

We enjoyed the workbook approach added to the oral.

It seemed to move along too rapidly. Long sentences were hard to understand and to repeat.

Conversations in Spanish too rapid to grasp. Interpreting conversations would help to hold interest.

Hard to maintain interest in taped presentations.

Not enough time given.

For best results individual teachers should be used. The tape is not very effective alone.

Too much ground covered per year.

He moved too rapidly, not enough review of basic vocabulary.

A follow-up period to review material covered I think necessary. Not having it is a weakness during which we lost much of the presentation. Presentation of workbook weak - not definite enough.

Yes, need more time - need same block of time as arithmetic. Need simplified text and workbook. Need much teacher motivation to maintain T.V. listening.

More time and application if the subject is to be learned. Little motivation.

Some means by which to maintain more interest.

15. Could you indicate positive factors in the presentation?

The program shows excellent preparation.

Use of Spanish dictionaries helped - skill - good job of presenting.

Good job as teacher.

Good teacher with enthusiasm.

Interestingly presented, workbook excellent.

Workbook a great factor in gaining interest. 2

Interest by children picked up when workbooks were introduced.

The very positive approach of the television teacher was a joy to all.

Children have learned many records that they are able to use in every day experiences.

Don Miguel excellent - understanding of children's interests. Good sense of humor. Good enunciation - easy to hear and understand. Workbooks helpful.

The T.V. programs were quite interesting. Visitors on the program were well received.

Good instruction considering all factors. Well planned and organized. Phases were very interesting because of relationship to other areas.

Don's sense of humor.

T.V. excellent. As master teacher only. Is excellent teacher motivation but T.V. must have classroom time for transfer of learning or T.V. time is wasted. Mr. Hathaway is a superb teacher.

Presentation is good.

More participation in writing it.

16. Could you indicate areas in which the program could be improved?

The pupils have wished more explanation and drill on new words had been given at beginning of lessons.

Talk more slowly - use written symbol sooner. Workbook was good, but needed a Spanish-English index.

More personal contact with teacher - more introductions for teacher.

Continue workbooks and elaborate on them on daily programs.

It is imperative that the classroom teachers be skilled in the language.

Sentences should be translated for the children.

More translation.

Let's continue.

More visual methods of presenting words. Deal more with vocabulary interest of long sentences or phrases.

English equivalents alongside Spanish words in workbook lists. Children felt need of reference assistance.

Move to different surroundings (children indicated that they got tired of same background, thoroughly enjoyed the move to the kitchen studio).

More visual presentation of words, easy vocabulary words with objects. Not long sentences.

Use the tape with the workbooks mostly. If possible have a Spanish visiting teacher in the system. Spanish is surely an important language for many of our future leaders and business men.

Less material covered per year. Mastery of phrases causes most trouble. Should be kept at a minimum.

I suggest that teachers take necessary credits in Spanish and let the program center around teacher using well planned T.V. as supplement.

More T.V. and less tape. More review. I'd like to take Level 3 next year spending one-half hour a day on Spanish. I'd like to try Level 1 with a new fifth grade class.

Also English-Spanish vocabulary in their workbooks. Workbook to be finished on certain day and corrected on that day. They seemed to lose interest in workbook as they went along.

The teacher training sessions were "only" a repetition of T.V. lessons for the pupils - could be more intense for the teacher. More tests for the pupils. Would feel vocabulary should include listening with Spanish-English, otherwise teacher must transfer many words into English. Pupils should have in vocabulary workbook the same words and phrases as in teachers manual. The T.V. is excellent, but in my opinion we need the "old" time text vocabulary lists drill etc., in addition to or along with T.V.

It would seem Spanish should also be offered in seventh grade in order to carry on with the elementary program. I definitely am in favor of Spanish as our second language, but realization of time must be had and all for in the classroom; otherwise, the subject is really only getting lip service. I believe our class profited much and correlated many learnings into a basic knowledge of English words and the similarities of both languages in word analysis, root words, etc. In my opinion, it would also seem that seeing the word does not affect "bad" pronunciation rather, with drill strengthens the retention of the word. Just oral speaking and hearing is futile at the age level. Pupils have other senses developed and we should make use of them.

Presented as an elective subject for those that want it.

APPENDIX F

A Summary of a Questionnaire Answered by Participating Teachers at the Completion of the Third Year of T.V. Spanish Presentation, 1962-63 87

A SUMMARY OF A QUESTIONNAIRE ANSWERED BY PARTICIPATING TEACHERS AT THE COMPLETION OF THE THIRD YEAR OF TV SPANISH PRESENTATION, 1962-63

Personal

Have you a background in a foreign language? No 7 Yes 7

Which one? Norwegian, German, Spanish, French, Greek, Finnish, Swedish

Has it been of assistance? No 2 Yes 5 No answer 7

Has your interest been maintained? No 6 Yes 6 No answer 2

Would you like to continue the program next year? No 7 Yes 7

Relative to Children in the Program - In your judgment

Was interest in the program sustained by children of all levels of ability? No 14 Yes 0 No answer 0

a) Which group's interest was maintained? Upper ability group

If interest was not sustained, what factors do you feel were responsible?

It does not provide an opportunity to repeat a certain lesson if difficulties have arisen; consequently more and more problems develop.

Because their teacher couldn't help them when they needed it in their work books, supplying correct words, etc.

Lower ability pupils could not keep up with presentations.

Inability to concentrate on T.V. and tape, also a foreign language is difficult for some, also not considered a subject, no marks on cards except probably comments.

Conversation was presented too rapidly.

T.V. not working at times and not receiving tape recordings in time, and too short a period.

Moved too fast - they were all successful first year with only words and/or simple phrases. Longer phrases and sentences "threw them."

Generally too difficult for average and low groups.

Poor background in Spanish from second year, also the inability of a T.V. presentation to gear itself to the needs of a particular class.

The media itself, incomplete mastery of nouns, fast pace, a teacher can employ "in room" motivation games (on T.V. this is impractical) individual differences.

Children could not hear clearly the words being pronounced nor did they understand the meanings.

Which level of ability was most difficult to motivate?

Lower and middle (13)

When a teacher can't understand the language used and the same for the children, there aren't any levels of ability.

Which parts of the presentation were most interesting to the children?

Numbers - work books

When they understood and could take full part.

Actual speaking and use of language in class discussions and situations.

When there was some exchange between T.V. and class.

Exercises where pupils would write, draw or color.

Work books, maps and guests.

Work books and songs.

Any part having to do with music or the work book were most interesting.

They preferred the T.V. program.

Animals, guests.

Special presentations (Christmas, etc.)

T.V. presentations which included foreign visitors.

Cultural information and background.

Interviews with people who were celebrities like Camilo Pascual. Visits to the various countries were interesting.

Which parts were most deadening?

Tapes

When no English was spoken or words explained. When the T.V. failed and one received one-half a program or lost one completely.

Too much repetition.

When the class was performing note exercises.

None to some, all to a few.

Maps presented to the class.

Interviews with those from Latin American countries for most of my children. The slower students were lost at the beginning of each program and were extremely bored with it all.

The tape recording was hard for many as the sound effect was hard to get the sound clear at times.

Dramatization

Sentence structure, grammar, etc.

Tapes and T.V. presentations with skits.

Exposure to long phrases.

The places where Don Miguel would say something and have the children repeat. I feel that he should show the words on cards or blackboard so the children can see as well as hear what is being introduced.

In what ways do you feel your children profited from the program of Spanish Instruction?

Their horizons were broadened. They were introduced to South America and some of its people. They learned sympathy for foreigners learning English.

Some children who were very much interested followed up with other members of family speaking the language at home.

Certainly their knowledge of South American geography increased and their understanding.

To those who were interested it gave a satisfying sense of achievement. A good background for a future foreign language.

Introducing a foreign language for high-ability group, made many stop and think.

Many had to think and study habits improved.

The better students gained some knowledge of the language and some understanding of the people who speak the language while the poorer students gained nothing.

More interested in word study, their own language and more careful in English of pronounciation of words.

Basic understanding of language - appreciation of differences in English and Spanish.

They have a general vocabulary in Spanish.

Many have a fairly good reading understanding of Spanish. Several gained a good comprehension of spoken Spanish.

General information - a knowledge of basic nouns and phrases- a motivational factor for future study of Romantic languages for some.

I think they are made aware of other groups and what their contribution has been to our society. They were amazed at the things which the Spanish had contributed to our country and society.

What effect do you feel the deletion of time from the basic subject area has had on that area?

Very little.

It made for constant pressure to try to cover basic skills in other subjects because more time was necessary to do work-book and keep with the T.V. and tapes.

Pupils who could not be motivated or didn't have interest could have used this time to more advantage in basic subject areas such as reading and arithmetic.

There have been some negative results here. We were not able to cover as much material.

That much less teaching learning and practice in the subject from which time was deleted.

None.

None.

Taking time out from arithmetic had a definite detrimental effect on the understanding of that subject.

I do not feel that any subject suffered from the Spanish being taught as my better half of class kept up in all subjects.

Little if any.

Some effect noted but we completed what we had intended.

The deletion had very little effect. With less time for the basic subject one made an extra effort to increase the quality of the teaching.

None, teachers tend to overemphasize.

I do not feel that it has had a bad effect on the basic subject area other than cutting in on the time. It helped to give the afternoon some added variety.

Additional Comments:

The difficulties encountered when learning a language through television may discourage one from studying a foreign language in high school.

It is wonderful to have the teaching of languages in elementary grades, but I fail to see how a teacher who has never had a lesson in the language or an ear for it, to try to teach it, even using T.V. and tapes, in a classroom a teacher is necessary. P.S. Howard Hathaway was a wonderful teacher but he needed my help for real team teaching and I was nonpulsed too often and couldn't teach Spanish.

I feel to do a good job in teaching language, teacher must be better qualified in said language so as to better follow through T.V. lessons and tape recordings from the education T.V.

There may be a place for a foreign language at the elementary level, but not this way and at the expense of some other area.

It is fine for a select group of the class. I certainly feel Mr. Hathaway showed fine planning and had a fine T.V. personality.

The interest in the Spanish program picked up when workbooks were introduced. The children enjoyed this very much. I liked the tapes because they could be stopped until a word was pronounced correctly.

Present materials slowly.

I feel that teaching Spanish at McKinley School is a waste of time, unless more time is allowed for the classroom teacher to work with the students. I feel that the tape recorder sessions were valuable and could be expanded and used to good advantage. If materials such as those used by Don Miguel were in the hands of each classroom teacher and the hands of the children much more learning would take place. The children seemed to enjoy the workbooks because they were concrete materials not just a fleeting picture on a screen. More workbook material would be an advantage and would lead to better understanding. Fifteen minutes per day is definitely enough time. Don't we now have enough time in the school day without subtracting from one of the other subject matter areas.

My only criticism would be in the length of the Spanish period. I feel it was too short a time, as a fifteen minute period as we had should be followed by an open discussion which would aid the slow students.

I feel that for a program of this sort to be successful, it should be put on more of an "elective" basis (perhaps selective by teacher observation in ability and interest) and be "taught" in the classroom by someone with experience in the language.

Difficult to motivate - undue pressure needed at times to insure attention from average and low groups.

I strongly believe that a foreign language taught at the elementary school level is good. It is difficult to learn the first foreign language, but once it is mastered it is relatively simple to learn additional languages. The success of the program depends greatly upon the interest and background of the teacher. I believe suspension is important (by some of the Spanish program personnel). It would be of great value to have a Spanish visiting teacher to visit each classroom periodically and hold discussion in Spanish with the class. The tape has great limitations as a media in teaching Spanish alone but combined with classroom teaching instruction it becomes very valuable. Before starting the Spanish program in the fall it might be of great importance to spend one T.V. period explaining and discussing the importance of a foreign language to the pupils. This is done by the classroom teacher naturally but if reinforced by the T.V. teacher it might serve as an incentive for more pupils.

I am strongly in favor of teacher preparation via college courses for their own independent handling of foreign languages in the classroom. I definitely feel there is a place in the elementary curriculum for languages.

The children could not hear distinctly the words that were repeated. I think it would be more helpful to flash the words on board or cards as they are being repeated. I think it would hold their attention too, if the words were immediately translated for them so they would get something from the foreign words. More music would be preferable with words when available.

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